

REMARKS

The disclosure has been amended to overcome the objection to the specification. Favorable reconsideration is respectfully requested.

Claim 15 has been amended to overcome the objection thereto. Favorable reconsideration is respectfully requested.

The Examiner is correct that the end cap is moved in the axial direction during assembly (i.e., is slideably mounted as recited in claim 1). Further, the Examiner is correct that the end cap is held from sliding (although slideably mounted) by the backlash reducer. However, it should be appreciated that even though held from sliding after assembly, the end cap is still slideably mounted (but held from sliding). Assembly does not change the structure of the elements, but rather the relationship of those elements changes. Thus, this is not a product-by-process limitation. It is respectfully submitted that the objection to claim 1 has been overcome. Favorable reconsideration is respectfully requested.

It is indicated:

It is the opinion of the examiner that achieving the machining tolerances necessary for eliminating backlash are possible.

In this regard, please see page 1, lines 24-28 of the present application. The motive of the invention is that reliable reduction in backlash can be obtained WITHOUT HAVING TO ACHIEVE THE NECESSARY MACHINING TOLERANCES, and the structure of the present invention, which is not suggested by the prior art, accomplishes that.

In Takahashi, a stepped joint is provided between rod cover 3 and end cover 22 (as best seen in Figure 1) and bolts 53 shown in Figures 2, 3, 5 and 6 pass through rod cover 3 and are threaded into cover 22 and are tightened until the axial ends of rod cover 3 and end cover 22 abut. It should be appreciated that no matter how much torque is placed upon bolts 53 or if another type of bolt is substituted for bolts 53, the axial length of the interior of rod cover 3 and cover 22 does not change. For its rod retaining mechanism, Takahashi utilizes brake shoes 24, shoe holder 25 and piston guide 26 which suffer from the disadvantages set forth in the specification of the present application at least at page 1, line 15 and following. In particular, internal movement of brake shoes 24, shoe holder 25 and piston guide 26 relative to rod cover 3

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and end cover 22 or, in other words, backlash depends upon the tolerance of manufacture of each of the brake shoes 24, shoe holder 25, piston guide 26, rod cover 3 and end cover 22. There is no way to reduce that backlash absent replacement of one or more of those parts, and there is no way to apply a force to and hold end cover 22 after mounting. Thus, Takahashi suffers from the disadvantages of the prior art and does not accomplish the function of the present invention.

It is respectfully requested that the Examiner identify where Stratienko in any way suggests or discusses backlash reduction. Further, it is respectfully requested that the Examiner identify where the structure of Stratienko allows for adjustment of backlash. In this regard, bolts 9 of Stratienko suffer from the identical deficiency as bolts 53 of Takahashi. As set forth at least at column 5, line 35-37 of Stratienko, screws 21 allow adjustment of springs 18, but not the friction collar. Thus Stratienko does not suggest the deficiency of Takahashi.

Thus, it is respectfully submitted that the rejection of the claims based upon Takahashi has been overcome. Favorable reconsideration is respectfully requested.

Gottling previously cited in the Information Disclosure Statement filed March 8, 2004 was indicated as being considered by Examiner Butler. As Gottling was not previously applied, Examiner Butler apparently recognized that the present invention distinguished thereover. Specifically, how does bottom plate 72 of Gottling in any way prevent relative movement of the clamping element (friction collar)? However, in a spirit of conciliation and to advance prosecution of the present application, claim 1 has been amended to further define the present invention in a manner to further distinguish over Gottling.

Thus, it is respectfully submitted that the rejection of the claims based upon Gottling has been overcome. Favorable reconsideration is respectfully requested.

The Patent Office has indicated consideration of the United States and foreign patents listed in the NOTICE OF REFERENCES CITED as B in the January 19, 2005 Official Action and as A and B in the August 31, 2004 Official Action and of those cited by applicant. By the lack of application of these references and others like them within the classes or subclasses searched, the Examiner apparently recognizes the clear patentability of the present invention over any of these references.

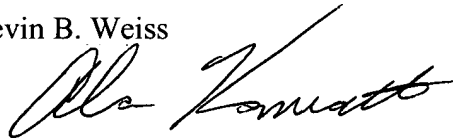
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Therefore, since the claims of the present application have been shown to include limitations directed to the features of applicant's motion control apparatus with backlash reduction which are neither shown, described, taught, nor alluded to in any of the references cited by the Examiner and by the applicant, whether those references are taken singly or in any combination, the Examiner is requested to allow claims 1-21, as amended, of the present application and to pass this application to issue.

It was the belief of the undersigned that Examiner Butler agreed in the telephonic interview of May 17, 2005 that each of the rejections had been overcome but could not indicate that the application was in condition for allowance until after an independent review of the prior art and written comments and a further, updated search was performed. The primary references of the current rejections were previously cited and not found in the updated search. Additionally, a personal interview was held, and multiple Responses prepared and filed. Thus, in light of the extraordinary effort already placed upon applicant and if any obstacles exist to the allowance of this application, it is respectfully requested that a telephonic or personal interview with undersigned occur to advance prosecution of the present application.

Respectfully submitted,

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